

Amendments to the Claims

Listing of Claims:

Claims 1 - 12 (canceled).

Claim 13 (currently amended). An optical module, comprising:

a circuit carrier;

a semiconductor element disposed on said circuit carrier, said semiconductor element having an optically sensitive surface; and

a lens unit for projecting electromagnetic radiation onto said semiconductor element, said lens unit including a lens holder and at least one optical lens mounted to said lens holder in a defined position relative to said lens holder;

said lens unit holder being supported directly on said sensitive surface of said semiconductor element.

Claim 14 (previously presented). The optical module according to claim 13, wherein said lens unit includes a lens holder supported on said sensitive surface of said semiconductor element.

Claim 15 (previously presented). The optical module according to claim 13, which further comprises a frame-shaped area formed on said lens holder, wherein said semiconductor element rests on said frame-shaped area with said optically sensitive surface.

Claim 16 (previously presented). The optical module according to claim 13, which further comprises a frame-type support formed on said lens holder, wherein said semiconductor element rests on said support with said optically sensitive surface.

Claim 17 (previously presented). The optical module according to claim 13, wherein said lens unit includes a support lens disposed on said sensitive surface of said semiconductor element.

Claim 18 (previously presented). The optical module according to claim 17, wherein said support lens is formed with a flat surface resting on said sensitive surface of said semiconductor element.

Claim 19 (previously presented). The optical module according to claim 18, which comprises an amount of optical gel between the flat surface of said support lens and said sensitive surface of said semiconductor element.

Claim 20 (previously presented). The optical module according to claim 17, which further comprises a frame-type support formed on said support lens at least in sections thereof, and wherein said sensitive area of said semiconductor element rests on said support.

Claim 21 (previously presented). The optical module according to claim 13, wherein: said lens unit is disposed on one side of said circuit carrier and said semiconductor element is disposed on an opposite side thereof; and

said circuit carrier is formed with an opening allowing electromagnetic radiation to be projected by a lens assembly of said lens unit onto said semiconductor element.

Claim 22 (previously presented). The optical module according to claim 20, wherein said frame-type support of said support lens is:

at least as large as said sensitive surface of said semiconductor element; and
slightly smaller than an opening formed in said circuit carrier through which electromagnetic radiation is projected onto said semiconductor element.

Claim 23 (previously presented). The optical module according to claim 15, wherein said frame-shaped area of said lens holder is:

at least as large as said sensitive surface of said semiconductor element; and
slightly smaller than an opening formed in said circuit carrier through which electromagnetic radiation is projected onto said semiconductor element.

Claim 24 (previously presented). The optical module according to claim 16, wherein:
said semiconductor element is flip-chip mounted on said circuit carrier;
said lens holder or a support lens is formed with a closed frame formed to function as a flow barrier against an underfill material introduced between said semiconductor element and said circuit carrier during a mounting operation of said semiconductor element on said circuit carrier.

Claim 25 (previously presented). The optical module according to claim 16, wherein said lens unit or a lens holder are connected to said circuit carrier away from an opening formed in said circuit carrier.

Claim 26 (previously presented). The optical module according to claim 25, wherein said lens unit or said lens holder are connected to said circuit carrier by gluing, laser-welding, and/or screwing.

Claim 27 (previously presented). An optical system, comprising an optical module according to claim 13.

Claim 28 (new). An optical module, comprising:

a circuit carrier;
a semiconductor element disposed on said circuit carrier, said semiconductor element having an optically sensitive surface; and
a lens unit for projecting electromagnetic radiation onto said semiconductor element, said lens unit having a plurality of lenses, including a support lens formed with lateral supports disposed to support said support lens directly on a marginal part of said sensitive surface of said semiconductor element while leaving a central area of said sensitive surface exposed to radiation entering through said plurality of lenses.